

BEFORE
THE PUBLIC SERVICE COMMISSION OF
SOUTH CAROLINA

DOCKET NO. 2021-89-E
DOCKET NO. 2021-90-E

In the Matter of:

Duke Energy Carolinas, LLC's and
Duke Energy Progress, LLC's
2021 Avoided Cost Proceeding Pursuant to
S.C. Code Ann. Section 58-41-20(A)

)
)
) **REBUTTAL TESTIMONY OF**
) **DAVID B. JOHNSON**
) **ON BEHALF OF DUKE ENERGY**
) **CAROLINAS, LLC AND DUKE**
) **ENERGY PROGRESS, LLC**
)
)
)

I. INTRODUCTION AND PURPOSE

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is David B. Johnson. My business address is 400 South Tryon Street, Charlotte, North Carolina 28202.

Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?

A. I am employed by Duke Energy Corporation (“Duke Energy”) as Director of Business Development and Compliance.

Q. DID YOU PREVIOUSLY FILE DIRECT TESTIMONY IN THIS PROCEEDING?

A. Yes.

Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY IN THIS PROCEEDING?

A. The purpose of my rebuttal testimony is to respond to the testimony of Matthew Stanley on behalf of Pelzer Hydro Company, LLC (“Pelzer”) and Aquenergy Systems, LLC (“Aquenergy” and together with Pelzer “Pelzer/Aquenergy”) and John C. Ahlrichs on behalf of Northbrook Carolina Hydro, LLC (“Northbrook” and together with Pelzer/Aquenergy, “the Hydro Advocates”).¹

Q. PLEASE SUMMARIZE YOUR REBUTTAL TESTIMONY FOR THE COMMISSION.

A. My rebuttal testimony provides the Commission an overview of the current power purchase agreements (“PPA”) between Duke Energy Carolinas, LLC (“DEC”) and

¹ On June 10, 2021, the Hydro Advocates initially pre-filed direct testimony of Witnesses Stanley and Ahlrichs. On July 1, 2021, the Hydro Advocates filed amended pre-filed testimony of these two witnesses.

1 the seven hydroelectric (“hydro”) QF generating facilities owned and operated by
2 Pelzer/Aquenergy and Northbrook. I explain that the current avoided cost rates and
3 terms offered to these QFs are consistent with the Commission’s prior Orders
4 implementing the mandatory purchase obligation requirements of the Public Utility
5 Regulatory Policies Act of 1978 (“PURPA”) and the South Carolina Energy
6 Freedom Act of 2019 (“Act 62” or the “Act”). I also explain that it is the QF’s
7 choice whether to enter into a short-term one-year energy-only sales agreement or
8 to commit to sell capacity and energy to the utility for a longer term up to 10 years
9 under Act 62. Finally, I briefly address that DEC is already purchasing renewable
10 energy certificate (“REC”) from these QFs to meet the requirements of the North
11 Carolina Renewable Energy and Energy Efficiency Portfolio Standard (“NC
12 REPS”) compliance program.

13 **Q. ARE YOU INCLUDING ANY EXHIBITS IN SUPPORT OF YOUR**
14 **REBUTTAL TESTIMONY?**

15 A. No.

16 **II. RESPONSE TO HYDRO ADVOCATES**

17 **Q. ARE YOU FAMILIAR WITH THE HYDRO QFs OWNED AND**
18 **OPERATED BY THE HYDRO ADVOCATES WITHIN DEC’S SERVICE**
19 **AREA?**

20 A. Generally, yes. These hydro facilities include the Upper Pelzer and Lower Pelzer
21 facilities owned by Pelzer, the Piedmont and Ware Shoals facilities owned by
22 Aquenergy, and the Holiday’s Bridge, Saluda, and Boyd’s Mill facilities owned by
23 Northbrook.

1 **Q. DO THE PELZER/AQUENERGY QFs AND NORTHBROOK QFs**
2 **CURRENTLY SELL POWER TO DEC?**

3 A. Yes. Each of these facilities recently elected to enter into new QF PPAs with one-
4 year terms that will end in the first quarter of 2022. Two of these seven facilities
5 are currently selling to DEC under Standard Offer PPAs, while the other five are
6 selling to DEC under Large QF PPAs.

7 The Northbrook facilities previously sold their power to DEC pursuant to
8 longer-term fixed rates under five-year Standard Offer PPAs in effect prior to the
9 enactment of Act 62. However, these PPAs were terminated after the fixed term
10 ended, and the respective QFs elected to enter into new one-year PPAs.

11 The Aquenergy and Pelzer facilities ended their five-year fixed rate PPAs
12 in early 2021, and since that time have sold their power to DEC under one year
13 PPAs.

14 Table 1 below provides information for the current PPAs and REC
15 agreements for these facilities. I discuss the import of the REC agreements further
16 below.

1 **Table 1: Pelzer/Aquenergy & Northbrook PPAs and REC Agreements**

Facility Name	Owner	Utility / State	Size (MW)	Standard PPA	PPA Signed	PPA Start	PPA Term	REC Agrmt.
Piedmont	Aquenergy	DEC-SC	1.05	yes	2/19/2021	3/1/2021	variable	yes
Ware Shoals	Aquenergy	DEC-SC	6.30	no	2/17/2021	3/1/2021	1 year	yes
Upper Pelzer	Pelzer Hydro	DEC-SC	2.02	no	2/18/2021	3/1/2021	1 year	yes
Lower Pelzer	Pelzer Hydro	DEC-SC	3.30	no	2/18/2021	3/1/2021	1 year	yes
Saluda	Northbrook	DEC-SC	2.40	no	3/15/2021	3/15/2021	1 year	yes
Boyd's Mill	Northbrook	DEC-SC	1.50	yes	3/15/2021	3/15/2021	variable	yes
Holidays Bridge	Northbrook	DEC-SC	3.50	no	3/15/2021	3/15/2021	1 year	yes

2 **Q. HAS DEC ACTED IN GOOD FAITH AND OFFERED THESE QFs**
3 **ACCURATE AND APPROPRIATE AVOIDED COST RATE OPTIONS**
4 **THAT ARE CONSISTENT WITH THE MANDATES OF THE**
5 **COMMISSION UNDER ACT 62?**

6 **A.** Yes. All of these QFs had PPAs that terminated in early 2021 at the end of their
7 respective terms. Subsequently, DEC communicated with each of the QFs and
8 presented options for the QFs to enter into PPAs with terms up to ten years, as
9 provided for under Act 62. The avoided costs rate options offered to the
10 Aquenergy, Pelzer and Northbrook QFs were either DEC's Standard Offer Tariff

1 rates (for the two smaller QFs) or were the Large QF Tariff rates calculated
2 consistently with the methodology approved by the Commission under Act 62.²

3 The QFs all chose to enter into PPAs with one-year term rates (two under
4 the Standard Offer PPA and five under the Large QF PPA)—which is their right
5 under PURPA. As DEC/DEP Witness Snider explains, however, the implications
6 of the Pelzer/Aquenergy and Northbrook QFs signing up for one-year PPAs is that
7 they are not avoiding any future DEC capacity need and are only being paid an
8 avoided energy rate. While the avoided cost rates offered to the Pelzer/Aquenergy
9 QFs and Northbrook QFs are accurate and appropriate and have been calculated
10 consistently with the methodology approved by the Commission in Order Nos.
11 2019-818(A) and 2020-315(A), the one-year avoided energy rates are
12 approximately 20% lower than longer-term 10-year avoided cost rates that would
13 pay the QF for committing to provide both capacity and energy. If the
14 Pelzer/Aquenergy QFs and Northbrook QFs seek to enter into new QF PPAs for a
15 future term to commence in 2022, DEC will again offer to purchase their power
16 under PURPA and Act 62 under longer-term rates that would provide capacity
17 value. Ultimately, however, it is the QF's choice whether to commit to sell its
18 power to DEC under a longer-term agreement.

19 **Q. IN YOUR ROLE AS DIRECTOR OF THE DUKE ENERGY BUSINESS**
20 **UNIT RESPONSIBLE FOR NEGOTIATING LARGE QF PPAs, ARE YOU**
21 **AWARE WHETHER DEC OR DEP HAS EVER USED A PERFORMANCE**

² Order No. 2019-881(A), Docket Nos. 2019-185-E, 2019-186-E (Jan. 2, 2020), *reconsidered on other grounds* Order No. 2020-315 (April 16, 2020).

1 **ADJUSTMENT FACTOR OF 2.0 TO CALCULATE AVOIDED COST**
2 **RATES FOR HYDRO QFs IN SOUTH CAROLINA?**

3 A. I have investigated this issue since Witnesses Stanley and Ahlrichs filed their initial
4 direct testimonies on June 10, 2021, and consistent with Witness Snider's rebuttal
5 testimony, I can find no basis to suggest that either DEC or Duke Energy Progress,
6 LLC ("DEP") have ever offered these QFs avoided cost rates at any point in time
7 that were calculated utilizing a 2.0 PAF. I understand that the Hydro Advocates'
8 witnesses have amended their direct testimony to correct this point.

9 **Q. PLEASE COMMENT ON WITNESS STANLEY'S TESTIMONY THAT**
10 **OTHER STATES INCENTIVIZE HYDRO FACILITIES BY OFFERING**
11 **RENEWABLE ENERGY CREDIT OR "REC" PROGRAMS.**

12 A. After detailing some of the environmental and community benefits of
13 Pelzer/Aquenergy's hydro facilities, Witness Stanley points out that "[i]n many
14 other states where Central Rivers Power operates small hydroelectric facilities,
15 regulators acknowledge the benefits of small hydro and seek to support their
16 operations through targeted renewable energy credits[.]"³

17 Today, DEC and DEP procure RECs to meet their North Carolina
18 regulatory requirement under that jurisdiction's NC REPS compliance program,
19 as enacted under N.C. Gen. Stat. § 62-133.8. Under the NC REPS program, a
20 REC is defined as a tradable instrument that is equal to one (1) megawatt hour of
21 electricity or equivalent energy supplied by a renewable energy facility. The costs
22 of these REC purchases to meet the NC REPS requirements are 100% assigned to

³ Pelzer/Aquenergy Stanley Direct, at 9.

1 North Carolina retail customers and to those North Carolina wholesale customers
2 for which DEC provides REPS compliance services.

3 **Q. DOES DEC CURRENTLY PURCHASE RECs FROM THE**
4 **PELZER/AQUENERGY AND NORTHBROOK HYDRO QFs?**

5 A. Yes. DEC purchases RECs from each of the aforementioned hydro QFs today at
6 negotiated prices. These RECs are eligible for compliance with the NC REPS
7 program.

8 DEC executes a separate REC agreement with each of the QFs that outlines
9 the REC purchase and terms and conditions. As Witness Snider recognizes, these
10 REC agreements are entered into outside of PURPA.

11 DEC has been purchasing RECs from these QFs for the last several years.
12 Specifically, DEC has purchased RECs from the Pelzer/Aquenergy facilities since
13 2013 and from the Northbrook facilities since 2016. DEC will evaluate whether
14 it has a need for REC purchases in early 2022 when these current QF PPAs expire
15 and will negotiate for purchase of additional RECs from the QFs— assuming DEC
16 has a need and the QFs are interested in selling their RECs at that time.

17 **Q. PLEASE DESCRIBE THE OPTIONS AVAILABLE TO THE**
18 **PELZER/AQUENERGY AND NORTHBROOK HYDRO QFs AT THE**
19 **END OF THEIR CURRENT PPA TERM.**

20 A. Pelzer, Aquenergy and Northbrook all have the option under PURPA, as
21 implemented in South Carolina under Act 62, to sell their output to DEC under a
22 long-term PPA up to 10-years. QFs that are less than 2 MW have the option to sell
23 under the Standard Offer PPA, with fixed rate options of 5 or 10 years.

1 Alternatively, they can choose to sell under the Standard Offer Tariff variable rate
2 (this variable rate is changed approximately every 2 years when DEC files a new
3 Schedule PP).

4 QFs that are greater than 2 MW have the option to sell their output under
5 the Large QF Tariff for up to ten-year fixed rate terms, and at avoided cost rates
6 calculated utilizing the methodology approved by the Commission. In addition,
7 these hydro facilities could choose to sell to other third parties.

8 DEC will work with the Hydro QF Advocates to ensure they understand
9 these options and can select the best PURPA rate for each facility.

10 **Q. DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY?**

11 A. Yes.